

# The Herb Society of America's Notable Native™ Herb 2024 *Agave americana* L., Agave



*Agave americana*.

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**Family:** Agavaceae

**Latin Name:** *Agave americana* L.

**Common Names:** American Century Plant, Aloe, Maguey

**Growth:** Herbaceous perennial

**Hardiness:** Will grow in semi-arid areas with temps no lower than 20°F

**Light:** Full sun

**Soil:** Moderately moist to dry

**Water:** Moderate rainfall, tolerates drought

**CONSERVATION STATUS: SECURE**

## History

*Agave americana*, Century plant, maguey, or American aloe, is a genus of monocots of some 200 species indigenous from Central America to northern Mexico, and in some tropical areas of South America.

The word Agave comes from the Greek *agavos*, meaning "noble" or "illustrious." Dating back to antiquity, Agave has

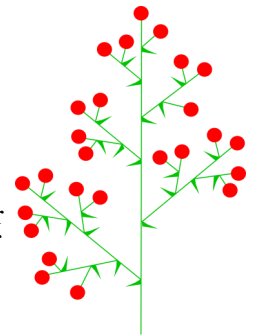
impacted human societies across three continents. The plant has long been associated with long life, health, and fertility. Fermented agave sap, called pulque, was central to religious rituals and sacrifices in Mexican (Aztec) cultures. Ancient cultures of western Mexico worshipped Agave and believed the plant embodied the Aztec goddess Mayaheul's earthly power over wind, rain, and crops.

Agave sap has been used in food and drink preparations for thousands of years. Distilled alcoholic beverages, tequila, and mezcal are traditional products of Agave. The plant's leaves, heart, floral stalk, and roots were used to produce food, sugar, syrup, medicines, and fiber.<sup>1,2</sup>

## Description

With a rosette of leaves reaching from 5' to 10' wide, each leaf being 3' to 5' long, the majestic *Agave americana* makes an eye-catching addition to the landscape, even in the case of a small beach home. The grey-green to blue-green leaves have a waxy covering that helps retain moisture. Sharp marginal spines line each leaf, making gloves essential for handling.

It may take a plant from 10 to 30 years to bloom, but it is a spectacular growth of a blooming shoot that reaches to 25' or more near the end of its life. The top of the blooming shoot grows branches supporting multiple flower panicles, each holding yellow flowers to 4" long. Spectacular!<sup>3</sup>



A typical panicle. A derivative work based on [GFDL Wiecha.png](#) by Daniel Miłaczewski

## Culture & Habitat

Monocarpic Agave species are native to some of the toughest environments in the Southwest US and Mexico. These desert species deal with little rainfall and sandy, gravelly soils where temperatures can be over 90° during the day and down to the low 40s at night. With the inclusion of the genus *Manfreda*\* into Agave, the distribution, soil tolerances, and temperature range have expanded. Agave [*Manfreda* group] is found in open sandy prairies, upland rocky cliffs, and sandy woodland openings. Some species, (e.g., *A. longiflora*, *A. maculosa*) have adapted to the caliche soils found in Texas. The temperature

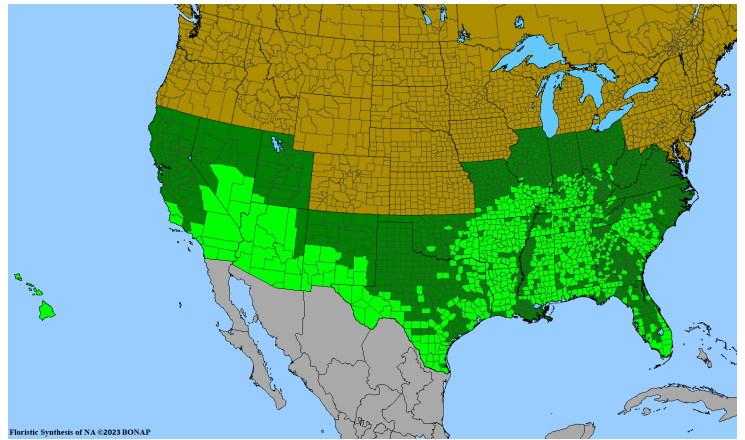


Agave getting ready to bloom. N.C. coast.

©K. Schlosser



*Agave* spp. in the Saguaro National Park, AZ. ©K. Schlosser



Agave U.S. Distribution map, updated Sept. 2023. See credits in References section. Courtesy Dr. John T. Kartesz, Director,

range tolerance of *Agave virginica* has expanded into cold hardiness zone 6 (minimum average temperature 0° to -10°).<sup>3,4</sup>

## Uses

Agaves have been used to make just about everything from food to ropes to the high alcoholic content of tequila.

Pulque, the milk-colored national drink of Mexico since pre-colonial times, was made by fermenting the sap accumulated at the base of the agave. Later, the heart of the blue agave (*A. tequilana*) was cooked and distilled to make tequila and mezcal. Some species of agave such as the lechuguilla species were used as medicine. Recent research has shown that the saponin in this plant can be used to combat bacteria, molds, and other microbes. The roots and leaves of the lechuguilla agave contain saponin and were used as soap.<sup>5</sup>

Other species were so toxic that they were used to tip arrows with poison and to stun fish for an easy catch.



*Agave americana* blooming, seldom seen except from above. ©Charmaine Richardson, Lady Bird Johnson Wildflower Center

The leaves had many uses. They were used as thatch for houses and made into carpets, clothes, sandals, ropes, and blankets. The leaves were mashed to a paste to make paper. The thick, juicy base of the plant was baked and used as nutritious food. The base was also cooked to convert the starches into sugar or syrup, which is still used as a high fructose sugar substitute today.

When pulled, the needle-sharp spines on the leaves separate from the leaf with a string of tissue attached that can be used as a needle and thread. Dried agave leaves were also used as fuel and today are being considered as a source of biofuel. Quids, agave leaves combined with wild tobacco, were chewed as a stimulant. The agave plant is also used as an interesting, drought-tolerant landscape plant with a long life.<sup>6</sup>

## Pollinators

Most Agave species developed night-blooming cream to yellow inflorescences that produce plentiful amounts of nectar and pollen, a natural attractant for night-flying bats, which perceive it as deliciously fragrant though we humans would find the nectars ammonia-like odor less appealing. The pollen they collect is distributed and promotes the continued success of the species. Bats also collect pollen to feed to their growing nestlings.

Night hawk moths and hummingbirds also act as pollinators, along with the occasional bees and other daytime flying insects who pick up and distribute pollen.

## Propagation

The easiest propagation method is to root the “pups” (offshoots) that form at the base of the mother plant or bulbils on the flowering stem. Since agaves are often armed, wear gloves when cutting the pups or bulbils off of the plant with a clean, sharp knife or pruner. If the pups or bulbils have developed roots, you can plant them immediately. Otherwise, set the pups and bulbils out for 2-3 days to allow the wound to dry and callus over. Then plant in a well-draining medium that is damp, but not wet. Too moist of a medium will cause stem and root rot. These plantlets should root in 1 to 3 weeks.

Another method is growing from seed. Sow the seeds over a well-draining, moist medium that contains sand or perlite. Cover the seeds with sand, at no more than 1/8” depth. Keep the seeds warm - a seed mat might help here, and the medium damp, but not wet. Depending on the species, seeds will germinate in 2-3 weeks. After the seedlings have developed 2 or 3 leaves, transplant them to their own pots.<sup>7</sup>

## References

<sup>1</sup> Adams, Karen R., Keith L. Johnson and Terence M. Murphy. 2015. Prehistoric Puebloan yucca (*Yucca*) quids with wild tobacco (*Nicotiana*) contents: Molecular and morphological evidence from Antelope Cave, northwestern Arizona. *Journal of Field Archaeology*, June 2015. Vol. 40 No. 3. Accessed 9/19/23. <https://www.jstor.org/stable/24409360>

<sup>2</sup> Arizona-Sonora Desert Museum, Genus Agave. Available online, accessed 10-16-2023 at [https://www.desertmuseum.org/books/nhsd\\_agave.php](https://www.desertmuseum.org/books/nhsd_agave.php)

<sup>3</sup> Arizona-Sonora Desert Museum.

<sup>4</sup> N.C. Cooperative Extension Service. *Agave*, Extension Gardener Plant Toolbox. Accessed 11-07-2023 <https://plants.ces.ncsu.edu/plants/agave/>

<sup>5</sup> Havard, V. 1895. Food Plants of the North American Indians, *Bulletin of the Torrey Botanical Club*, Vo 22, No. 3, Mar. 2, 1895, pp 98-125. <https://www.jstor.org/stable/2477757>

<sup>6</sup> Havard, V. 1896. Drink Plants of the North American Indians, *Bulletin of the Torrey Botanical Club*, Vol. 23, No. 2, Feb. 29, 1896., pp. 33-46.

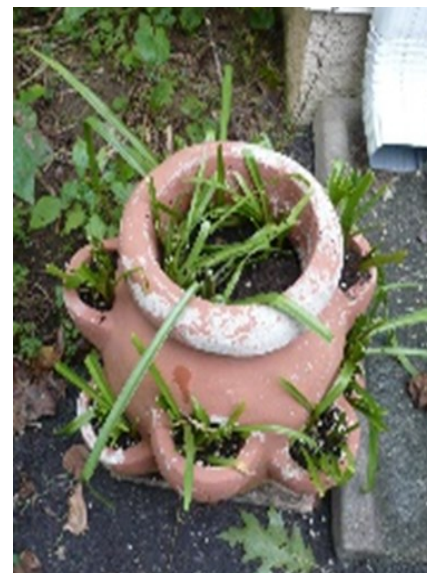
<sup>7</sup> Miller, Laura. How To Propagate Agave: Instructions And Tips For Agave Propagation. *Gardening Know How*. Accessed 11-07-2023. <https://www.gardeningknowhow.com/ornamental/cacti-succulents/agave/agave-propagation.htm>



*Agave parryi*. Growing from pups given to ©Elizabeth Kennel.



*Agave amica*, Tuberose. Kim & Forest Starr, Wikipedia. [cc by sa 3.0 unported](https://creativecommons.org/licenses/by-sa/3.0/) Formerly



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## Distribution Maps

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Kartesz, J. T. personal communication regarding current U.S. range of Agave.



Rosalind Pope standing at the foot of Agave ready to bloom on the N.C. coast. This is along a road and the town “trimmed” the leaves. © K. Schlosser

Produced by the HSA Native Herb Conservation Committee with the assistance of Susan Betz, Debra Knapke, Elizabeth Kennel, Maryann Readal, Judy Semroc, and Kathy Schlosser.

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